

CLAIMS

1. An automotive electric heater apparatus comprising an electric heater for generating heat with power supplied from a high voltage power supply of 200 V to 400 V DC, and a thermal fuse including a temperature detecting element connected in series to the electric heater through lead wires, the temperature detecting element fusing and turning off the power circuit of the electric heater when the electric heater is abnormally overheated,

wherein the thermal fuse includes a casing accommodating the temperature detecting element and the lead wires therein and mounted on the body surface of the electric heater, and the interior of the casing is sealed with a material higher in heat conductivity than air.

2. An automotive electric heater apparatus according to claim 1,

wherein the casing of the thermal fuse is arranged in such a manner that the longitudinal direction of the temperature detecting element coincides with the longitudinal direction of the electric heater, and one of the lead wires connected to an end of the temperature detecting element is bent in the shape of U in the casing and led out in the same direction as the other lead wire connected to the other end of the temperature detecting element.

3. An automotive electric heater apparatus according claim 1,

wherein said material having a higher heat conductivity than air contains ceramic or cement as a main component.

4. An automotive electric heater apparatus according to claim 1,

wherein the casing is mounted in surface-to-surface contact with the body of the electric heater.

5. An automotive electric heater apparatus according to claim 4,

wherein the casing of the thermal fuse is fixed on the body of the electric heater through a bracket.

5        6.    An automotive electric heater apparatus comprising an electric heater for generating heat with power supplied from a high voltage power supply of DC 200 to 400 V, and a thermal fuse including a temperature detecting element connected in series to the electric heater through lead wires, the temperature detecting  
10    element fusing and turning off the power circuit of the electric heater when the electric heater is abnormally overheated,

wherein the thermal fuse includes a casing accommodating the temperature detecting element and the  
15    lead wires therein and mounted on the body surface of the electric heater, the casing is arranged in such a manner that the longitudinal direction of the temperature detecting element coincides with the longitudinal direction of the electric heater, and one of the lead  
20    wires connected to an end of the temperature detecting element is bent in the shape of U in the casing and led out in the same direction as the other lead wire connected to the other end of the temperature detecting element.

25        7.    An automotive electric heater apparatus according to claim 6,

wherein said material higher in heat conductivity than air contains ceramic or cement as a main component.

30        8.    An automotive electric heater apparatus according to claim 6,

wherein the casing is mounted in surface-to-surface contact with the body of the electric heater.

35        9.    An automotive electric heater apparatus according to claim 8,

wherein the casing of the thermal fuse is fixed on the body of the electric heater through a

bracket.